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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,061	07/31/2003	Thomas R. Forrer JR.	AUS920030307US1	3511

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IBM CORP (YA)
C/O YEE & ASSOCIATES PC
P.O. BOX 802333
DALLAS, TX 75380

EXAMINER
BATAILLE, PIERRE MICHE

ART UNIT	PAPER NUMBER
2186	

DATE MAILED: 05/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/631,061	FORRER ET AL.
	Examiner	Art Unit
	Pierre-Michel Bataille	2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _14 March 2006_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-48_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-48_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All b)☐ Some * c)☐ None of:
   1.☐ Certified copies of the priority documents have been received.
   2.☐ Certified copies of the priority documents have been received in Application No. _____.
   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

1.   Claims 1-5, 10-21, 26-37, and 42-48 are rejected under 35 U.S.C. 103(a) as

being unpatentable over US 6,052,798 (Jeddeloh) in view of US 2002/0126408

(Okuyama et al).

2.   With respect to claims 1, 17, and 33, Jeddeloh discloses a computer

program/method in a data processing system including a storage drive for verifying a

condition of said storage drive's media, comprising:

A)   ***step 64, a memory access request is received from a memory***

requester, such as the system processor,

B)   in response to a receipt of said command, attempting, by said storage

drive, to read each one of a plurality of logical block addresses included in said

storage drive ***(the memory access request to include an indication of***

whether a read or a write is being requested together with an address of

the requested memory portion of the memory block); and

C)   verifying said condition of said media by determining, by said storage

drive, ones of said plurality of logical block addresses that are not in a readable

condition *(step 66 determines whether the requested memory portion of the*

memory block is defective) [See steps 64 and 66, Fig. 3; Col. 5, Lines 51-

61].

Although such a command is embedded with the read/write command which

verify whether a block of the storage device from which to read is readable and to which

to write is writable, Jeddeloh fails to specifically teach receiving within said storage drive

a command to verify said condition of said storage drive's media. However, Okuyama

teaches disk apparatus and information processing system, magnetic disk apparatus to

include a requesting unit for requesting the magnetic disk apparatus to re-set a value of

specification information capable of determining performance of the magnetic disk

apparatus, the magnetic disk apparatus comprising a re-setting unit to request the CPU

to issue a set feature command in order to set the performance parameter of the

information recording/reproducing unit 23 [Fig. 14; 204, Fig. 8; Par. 0062, 0056, 0070],

said recording/reproducing apparatus setting the drive to a writable/readable state [306-

311, Fig. 14]. Therefore, it would have been obvious to one of ordinary skill in the art as

with each read or write, the condition of the storage device is verified along with the

read or the write. One of ordinary skill in the art would have obviously combine the two

references because both are in the same field and a command to verify said condition

of said storage drive's media would have provided the addition of a flag/state identifying

readable/writable block of the disk apparatus and as well as a flag/state identifying

unreadable/unwritable block of the disk apparatus.

3.   With respect to claims 2, 18, and 34, Jeddeloh discloses

reassigning each one of said ones of said plurality of logical block addresses that

are not in a readable condition to a new logical block address *[(mapping the*

defective memory portions determined in step 50 to non-defective memory

portions in the reserved memory region) Step 60, Fig. 2; Col. 5, Lines 41-

43].

4.   With respect to claims 3, 19, and 35, Jeddeloh discloses:

A)   determining, by said storage drive, ones of said plurality of logical block

addresses that are nonreadable *(determining defective memory portions;*

step 50, Fig. 2);

B)   determining whether nonreadable logical block addresses are to be

reassigned *[Col. 5, Lines 20-27]*;

C)   in response a determination that nonreadable logical block addresses are

not to be reassigned, leaving said ones of said plurality of logical block

addresses that are nonreadable unaltered without reassigning said ones of said

plurality of logical block addresses that are nonreadable *[Col. 5, Lines 26-34]*;

and

D)   in response to a determination that nonreadable logical block addresses

are to be reassigned, reassigning said ones of said plurality of logical block

addresses that are nonreadable *[Col. 5, Lines 20-34]*.

5.   With respect to claims 4, 20, and 36, Jeddeloh discloses

determining whether nonreadable logical block addresses are to be reassigned

by checking the status of a parameter, said parameter indicating whether

nonreadable logical block addresses are to be reassigned *(checking the error

map to determine whether logical blocks are to be reassigned) [Col. 5,

Lines 15-34; Fig. 2]*.

6.   With respect to claims 5, 21, and 37, Jeddeloh discloses

receiving within said storage drive a single command to verify said condition of

said storage drive's media *[Col. 5, Lines 52-59]*.

7.   With respect to claims 11, 27, and 39, Jeddeloh discloses

during said verification, maintaining a list of said ones of said plurality of logical

block addresses that are not in a readable condition *[Col. 3, Lines 49-59]*.

8.   With respect to claims 12, 28, and 44, Jeddeloh discloses

verifying said condition of said media without altering data stored on said storage

drive *[Col. 4, Lines 31-41]*.

9.   With respect to claims 13, 29, and 45, Jeddeloh discloses verifying said condition

of said media without altering customer data stored on said media *[Col. 4, Lines 14-41;*

Col. 5, Lines 15-34].

10.   With respect to claims 14, 30, and 46, Jeddeloh discloses said storage drive

being coupled to a host computer system; querying said storage drive by said host

computer system during said verification; and transmitting a response to said query

from said storage device to said host computer system during said verification *[Col. 4,*

Lines 31-41; Col. 5, Lines 15-34].

11.   With respect to claims 15, 31, and 47, Jeddeloh discloses

        querying said storage drive by said host computer system during said

        verification, said query requesting a completion status; and transmitting a

        percentage completion from said storage device to said host computer system

        during said verification *[Col. 4, Lines 5-48]*.

12.   With respect to claims 16, 32, and 48, Jeddeloh discloses

        querying said storage drive by said host computer system during said

        verification, said query requesting a list of reassigned logical block addresses;

        and transmitting said list from said storage device to said host computer system

        during said verification *[Col. 5, Lines 15-34; Col. 6, Lines 9-23]*.

Claim Rejections - 35 USC § 103

13.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14.   Claims 6-9, 22-25, and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,052,798 (Jeddeloh) in view of US 2002/0126408 (Okuyama et al) and further in view of US 4,864,532 (Reeve et al).

15.   With respect to claims 6-8, 22-24, and 38-40, the combination of Jeddeloh and Okuyama teaches the invention as claimed; Jeddeloh additionally discloses: the memory device being nonvolatile memory such as EEPROM or flash memory [Col. 3, Lines 6-10; Col. 3, Lines 41-45] the memory being coupled through memory and expansion bus (26, Fig. 2); but the combination fail to specifically teach coupling and decoupling itself from the host. However, Reeve discloses sequence of operations operated in the sequential handling of data transfer operations where disk drive reconnects and disconnects itself to/from to data link processor in the process of transferring data complete I/O cycled operations [Col. 12, Lines 4-31]. Therefore, it would have been obvious to one of ordinary skill in the art, that storage medium couples and decouples itself from the host, as taught by Reeve, in order to continue an operation which was previously started by the data link processor.

16.   With respect to claims 9, 25, and 41, the combination of Jeddeloh and Okuyama teaches the invention as claimed; Jeddeloh additionally discloses: the memory device being nonvolatile memory such as EEPROM or flash memory [Col. 3, Lines 6-10; Col. 3, Lines 41-45]; the memory being coupled through memory and expansion bus (26,

Fig. 2); but the combination fail to specifically teach coupling said storage drive to a host

utilizing a SCSI bus. However, Reeve discloses sequence of operations operated

in the sequential handling of data transfer operations Small computer systems interface

(SCSI) bus [abstract; title]. Therefore it would have been obvious to one of ordinary skill

in the art, to utilize SCSI bus, as taught by Reeve, because SCSI controls information

transfer between a host computer system and certain compatible target devices.

17.   Claims 10, 26, and 42 are rejected under 35 U.S.C. 103(a) as being

unpatentable over US 6,052,798 (Jeddeloh) in view of US 2002/0126408 (Okuyama et

al) and further in view of US 6,332,204 (Russell).

With respect to claims 10, 26, and 42, the combination of Jeddeloh and

Okuyama teaches the invention as claimed; Jeddeloh additionally discloses the

use of an error table to reassign logical block addresses; but the combination fail

to specifically teach determining block addresses that require error recovery

procedures.

However, Russell discloses determining logical block addresses that require

error recovery procedures and reassigning block addresses that require error

recovery procedures [abstract; Col. 2, Lines 22-26]. Therefore, it would have

been obvious to one of ordinary skill in the art, to recover failing sectors because

data within a failing sector could be recovered before the sector becomes

completely unrecoverable, as taught by Russell [Col. 2, Lines 26-29].

Conclusion

18.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

19.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Pierre-Michel Bataille whose telephone number is (571)

272-4178. The examiner can normally be reached on Mon-Fri (8:00A to 4:30P).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Matthew M. Kim can be reached on (571) 272-4182. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Pierre-Michel Bataille
Primary Examiner
Art Unit 2186

April 28, 2006

PIERRE BATAILLE
PRIMARY EXAMINER